quent to a vascular spasm. If in such cases there is an "aura" the outbreak of the convulsions can almost always, be prevented by the inhalation of amyl-nitrite, and if the attack has begun it can be curtailed by such inhalations (Mitchell, Brown, Kuhlmann, Schroeter, etc.)

For *Angina pectoris* the amyl-nitrite was first recommended by Brunton (Lancet IV., vol. II), and its favorable effect was confirmed by Leishmann (Glasgow Med. Jour., 1869). Sanderson and Anstie (Am. Jour. Med. Ac., 1871) Madden (Practitioner IX.) Schroeter and R. Pick, (1874.)

As to the therapeutic value of amyl-nitrite in *Melancholia* the statements are rather conflicting. Meynert used it on the strength of the theory that this malady was chiefly caused by anæmia of the brain. And several of his cases seem to have been benefited by the amyl-nitrite. But others have not obtained any good result from its use. F. C. H.

THE ACTION OF TARTAR EMETIC. Dr. Angelo Mosso, *Lo Sperimentale*, Dec., 1875, publishes a lengthy paper on the action of tartar emetic, the conclusions of which as abstracted in the *Revue des Science Médicales* are as follows:

I. It is a rather general law that medicines injected into the veins, or under the skin, act more promptly than when given by the stomach. This is not the case with tartar emetic; while a dose of 3 or 4 centigrammes given by the mouth is sure to produce emesis in the dog, an intra-venous injection to produce the same result must be as much as 15—25 centigrammes. The condition of the stomach as to fullness or emptiness, the acid, or neutral condition of the gastric fluids, have no influence on the greater or less emetic action of tartar emetic. The emetic causes vomiting in two different ways, sometimes by exciting the terminal ramifications of the pneumogastrics, sometimes by acting on the nervous centres by the intermediation of a general altered state of the blood; and it is because of this dilution in the mass of the blood that it is necessary to inject into the veins a comparatively large dose in order to cause vomiting. If these views are correct, it is clear that a small dose administered by the mouth to animals whose vagi have been cut, should be ineffectual since in these experimental conditions the medicine can only act by absorption and central irritation. To confirm this induction the author divided the sub-diaphragmatic filaments of two young dogs, and when they had recovered from the operation, he gave each of them 4 centigrammes of tartarized antimony without results. He had to give 8 10 centigrammes to produce slight vomiting. Another corollary to this theory is, that an emetic injected into the veins, in sufficient quantity, ought to act more promptly than when introduced into the stomach. Experiments showed, in fact, that an intra-venous injection of 15—30 centigrammes caused emesis within the first five minutes, while a much longer time was required when it was administered by the mouth.

II. Among the symptoms of tartar emetic poisoning, the cardiac troubles play an important part. The pulse preserves for a time its rhythm and normal frequency, then it becomes accelerated and the arterial pressure is reduced. A little later the pulse becomes irregular, and presents now and then periods of slowing, which correspond with attacks of epileptiform convulsions. This intermittent slowing of the cardiac pulsations seems to be dependent upon a strong irritation of the vagi, for if we divide the vagi during an attack the pulse becomes at once very rapid and preserves its frequency till death. Other experiments also show that it is through the vagi that the influence of the emetic is transmitted to the heart. We know that atropine suspends the action of the pneumogastrics on the heart, and therefore in atropinized animals which we subsequently put under the influence of the emetic, we find no modification of the cardiac rhythm.

III. When we open, soon after death, the animals that have succumbed to poisoning by tartar emetic, we find the mucous membrane of the stomach, the duodenum and the liver strongly congested. These organs often present a violaceous tint like that of wine lees, and the cavities of the stomach and the intestine contain a great quantity of mucous and serous liquid. The author thinks that these phenomena of congestion and hypersecretion are the result of the irritation of the vaso-dilator filaments of the pneumogastric. In fact, in dogs, in which he previously divided the vagi, poisoning by tartar emetic did not cause this considerable hyperæmia of the abdominal organs. In these animals the mucous membrane of the stomach aud the intestines were pale or slightly rosy, and the secretion of mucous and serosity either was wanting or existed only in a very slight degree.

CYCLAMIN. Dr. Vincenzo Chirone *La Clinica*, Nov., 1875. (Abstr. in *Revue des Sciences Medicales.*)

The most important symptom and the most constant one produced by cyclamin, is stupor. The animal affected by this substance is not paralyzed, but is rendered stupid; it remains immovable, the head pendant and resting on the soil, respiration and circulation normal, sensibility preserved, often even exaggerated; sometimes we observe an attack of tremor of the members. Cyclamin seems to act first on the cerebral centres (stupor), then on the spinal centres (exaggeration of reflex action, hyperæsthesia, convulsions). Its action on the nervous system is probably secondary to a rapid and profound alteration of the blood.

ACTIVE PRINCIPLES OF MAIS AVARIA. M. Lombroso gives the chemical detail of the mode of extraction of certain poisonous principles he has obtained from the *Mais Avaria.* One was a bitter red substance obtained from tincture, soluble in potash and ether; it caused death when administered to frogs and pigeons, by producing convulsions and clonic spasms. Another mode of preparing the tincture gave a substance that